529,426

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



25 MAR 2005

(43) International Publication Date 8 April 2004 (08.04.2004)

PCT

(10) International Publication Number WO 2004/028742 A2

(51) International Patent Classification7:

B24B

(21) International Application Number:

PCT/US2003/030033

(22) International Filing Date:

26 September 2003 (26.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/413,772

27 September 2002 (27.09.2002) U

(71) Applicant (for all designated States except US): PROFES-SIONAL TOOL MANUFACTURING LLC [US/US]; 210 East Hersey Street, P.O. Box 730, Ashland, OR 97520 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BERNARD, David [US/US]; 378 Terrace Street, Ashland, OR 97520 (US). CHRISTIAN, William [US/US]; 778 Oak Street, Ashland, OR 97520 (US). HARRIS, Scott [US/US]; 1990 Teakwood Drive, Eagle Point, OR 97524 (US). MOSTTLER, Keith [US/US]; 13234 Antioch Road, White City, OR 97530 (US).

(74) Agent: KERINS, John, C.; Miles & Stockbridge P.C., 1751 Pinnacle Drive, Suite 500, McLean, VA 22102-3833 (US).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DRILL SHARPENER

(57) Abstract: A drill sharpener is provided which has a point-splitting port which simplifies the procedure for producing a split point on a drill bit undergoing sharpening. The point-splitting port is positioned relative to a grinding wheel assembly such that, when the drill held by a chuck is advanced toward the grinding wheel, a flute of the drill at the drill tip is brought into contact with the grinding wheel. The port has alignment stops therein which mate with flats provided on the barrel of the chuck to ensure proper alignment of the chuck and drill relative to the grinding wheel. The stops also limit the extent of inward travel of the chuck and drill to a predetermined distance. A debris or grit collection tube is also provided to be inserted into an unused port of the drill sharpener, to contain and confine any debris or grit attempting to exit the sharpener through the unused port.

